

U.S. Patent Application Serial No. 10/531,952

Amendment filed November 5, 2008

Reply to OA dated October 10, 2008

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows (paragraph numbers refer to the published application; page numbers to the original specification):

Amend paragraph [0001], on page 1, as follows:

[0001] This application is the U.S. national stage of International Application No. PCT/JP03/13475, filed October 22, 2003, which was published under PCT Article 21(2) as Publication No. WO2004/037925 and of which the instant application claims the benefit, which in turn claims the benefit of Japan Patent Application No. 2002-306642, filed October 22, 2002, Japan Patent Application No. 2003-068387, filed March 13, 2003, Japan Patent Application No. 2003-297209, filed August 21, 2003, and Japan Patent Application No. 2003-361345, filed October 22, 2003. All these applications are incorporated herein by reference in their ~~entirely~~ entirety.

Amend paragraph [0003], on page 2, as follows:

[0003] Currently, plastics are used widely in everyday life and in every field of industry. The amount of plastics produced a year in the whole world reaches about a hundred million tons. Most of the plastics are discarded after use, which causes a problem of disposal of the discarded plastics, such as burning or land filling. Moreover, exhaustion of petroleum resources which are raw materials of plastics is ~~concerned about~~ of concern. Thus, the disposal of the plastics is now becoming a global

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environmental problem.

Amend paragraph [0004], on page 2, as follows:

[0004] Accordingly, plastics that have a reduced impact on the environment are demanded and as such plastics, materials that are biodegraded and disappear with time under natural environment, and do not start from ~~exhausting~~ exhaustible resources are being studied. Currently plastics made from plant materials have attracted attention as such materials. The plastics made from plant materials have also advantages that they are excellent in recyclability and utilize recycling-oriented resources.

Amend paragraph [0012], on page 5, as follows:

[0012] That is, the present invention provides ~~an injection molded article~~ a resin composition that includes:

Amend paragraph [0015], on page 6, as follows:

[0015] Further, the resin composition may ~~further~~ include (D) an inorganic filler having a mean particle size of 1 μm to 5 μm within a range of 5 mass % to 20 mass % of the resin composition.

Amend paragraph [0016], on page 6, as follows:

[0016] Still further, the resin composition may ~~further~~ include 0.5 mass part to 10 mass parts of a carbodiimide compound based on a total of 100 mass parts of (A) the lactic acid based resin, (B) the aromatic aliphatic polyester having a glass transition temperature (T_g) of 0 °C or less and a heat of crystal melting (ΔH_m) of 5 J/g to 30 J/g, and/or the aliphatic polyester other than the lactic acid based resin, having a glass transition temperature (T_g) of 0 °C or less and a heat of crystal melting (ΔH_m) of 5 J/g to 30 J/g, and (C) the aliphatic polyester other than the lactic acid based resin, having a glass transition temperature (T_g) of 0 °C or less and a heat of crystal melting (ΔH_m) of 50 J/g to 70 J/g.

Amend paragraph [0017], on page 7, as follows:

[0017] Yet further, the resin composition may ~~further~~ include 0.5 mass part to 5 mass parts of an ester compound having a molecular weight of 200 to 2,000 based on a total of 100 mass parts of (A) the lactic acid based resin, (B) the aromatic aliphatic polyester having a glass transition temperature (T_g) of 0 °C or less and a heat of crystal melting (ΔH_m) of 5 J/g to 30 J/g, and/or the aliphatic polyester other than the lactic acid based resin, having a glass transition temperature (T_g) of 0 °C or less and a heat of crystal melting (ΔH_m) of 5 J/g to 30 J/g, and (C) the aliphatic polyester other than the lactic acid based resin, having a glass transition temperature (T_g) of 0 °C or less and a heat of crystal melting (ΔH_m) of 50 J/g to 70 J/g.

Amend paragraph [0030], on page 10, as follows:

[0030] In the present invention, lactic acid based resins that have different copolymerization ratios of the L form and the D form may be blended. In this case, it is only needed to set an average value of copolymerization ratios of the L form and the D form in a plurality of lactic acid based resins within the above-mentioned ranges. By blending the homopolymers of the L form and of the D form and the copolymer of the L form and the D form appropriately, ~~difficulty to cause bleeding~~ properties and exhibition of heat resistance can be balanced.

Amend paragraph [0119], on page 41, as follows:

[0119] The resin A was used as an aliphatic polyester other than the lactic acid based resin having a glass transition temperature (T_g) of 0 °C or less and a $\Delta H_m=5$ J/g to 30 J/g). An injection molded article was prepared in the same manner as that in Example [[1]] I-1 except that instead of "Nature Works 4032D" and "Eastar Bio", "Nature Works 4032D" and the resin A were dry-blended in a mass ratio of 85:15. The obtained injection molded article was evaluated similarly to Example [[1]] I-1. Table 1 shows the results obtained.

Amend paragraph [0127], on page 45, as follows:

[0127] An injection molded article was prepared in the same manner as that in Example I-1 except that polybutylene succinate ("Bionole 1001" manufactured by Showa Highpolymer Co., Ltd., $\Delta H_m=58.0$ J/g) was used as an aliphatic polyester instead of the aromatic aliphatic polyester having

a Tg of 0.degree. C. or less and a ΔH_m of 30 J/g or less, and that "Nature Works 4032D" and "Bionole 1001" were dry-blended in a mass ratio of 75:25. The obtained injection molded article was evaluated similarly to Example [[1]] I-1. Table 3 shows the results obtained.

Amend Table 8, on page 59, as follows:

Table 8

		Example II-9	Example II-10	Example II-11	Example II-12	Example II-13
B l e n d	Nature Works 4032D 4031D	55	55	55	55	55
	Ecoflex ($\Delta H_m=21.6\text{J/g}$)	10	10	10	10	10
	Bionole 1003 ($\Delta H_m=58.1$)	25	25	25	25	25
	SG-95	10	10	10	10	10
	Stabaksol P	1.0	2.0	3.0	4.5	5.0
Molecular weight holding ratio (%)		90	96	98	99	99
Deflection temperature under load ($^{\circ}\text{C}$)		57	57	57	55	53